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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,742	03/17/2004	Richard Brown	18189K-013110US	6902

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EXAMINER	
ALIMENTI, SUSAN C	

ART UNIT	PAPER NUMBER
3644	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/803,742	BROWN ET AL.
	Examiner	Art Unit
	Susan C. Alimenti	3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6 and 8 recite the limitation "the covers" in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claims.

3. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The aforementioned claim recites the limitation that air is supplied "between the covers", however the covers are not claimed as being over one another. Clarificaiton of the subject matter is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Stone (US 3,339,309).

Stone discloses a ground cover comprising two layers 11,12 that is used to protect at least a portion of a field crop from frost, heat, or other weather related damage. When in use air is introduced between layers 11,12 to provide thermal insulation (Stone, col.1, lns.30-40).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 11-14, 16, 20, 25, 26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone.

Regarding claims 11-14, 16, 20, 29 and 30, and the above discussion, Stone discloses the claimed invention except he does not positively disclose that the ground cover be laid out the day before harvest. Stone does not that ground cover 23 is used to protect a crop against frost damage (Stone, col.1, lns.8-10), this implies that said ground cover is laid on a crop the night before the anticipation of frost. It is noted that in many cases frost comes the day before an intended harvest and ground cover must be put down that night or else the crop would be damaged and would no longer be good for market sale. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place Stone's ground cloth on a crop the night prior to harvest in order to prevent frost damage that could result from that night's weather.

Regarding claim 12, Stone does not specify the type of crops however, the Examiner takes Official Notice that it is well known in the agricultural arts that crop cover is used for all plants in the group consisting of lettuce, spinach, cabbage, baby leaves, baby lettuce and baby spinach, since said crops are known to generally be grown in the spring and fall seasons when plants are most susceptible to frost damage.

Regarding claims 25, 26 and 28, Stone discloses that the ground cover is also used as a shield or heat screen but does not indicate that this shielding of light and thus heat is done to stunt plant growth (Stone, col.1, lns.13-14). It is implicit that when light is filtered through a screen and a limited amount of light and heat is permitted to reach growing plants, plant growth will be directly affected. Shading is used for two main reasons; in many areas where intense amounts of light or heat are not conducive to the growth of non-native plants because the plants will either perish, or grow too fast and the result will be a lanky undesirable plant or vegetable with poor fruit growth. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Stone's ground cover to shade plants from heat to stunt growth since it is known in the art that several plants do not grow correctly in their non-native habitat because of too much light or heat.

8. Claims 4, 6-9, 15, 18-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone, as applied to the above claims, and further in view of Maginnes et al. (US 4,073,089).

Stone discloses the claimed invention except it is not positively stated that heated air is passed between and under the two layers. Maginnes et al. (hereinafter Maginnes) discloses a method in the same field of invention, i.e. controlling plant growth

environments, that supplies CO_2 rich heated air to plants in a controlled environment. Similarly to Stone's system, Maginnes' method comprises two layers of agricultural film, a top layer 4 and an inner permeable layer 5. The CO_2 rich heated air (Maginnes, col.2, lns.31-34) is fed between the layers and then passes through inner layer 5 so that it passes underneath the cover into the space occupied by the plants. This is done so that the heat and CO_2 directly reaches the plants promoting strong plant growth. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stone's structure by using a permeable material for the inner layer and passing heated air into the system to promote plant growth.

9. Claims 10, 17, 22-24, 27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone as applied to claims 1 and 11 above, and further in view of Laverde (Battenfeld Glouster Engineering Inc.).

Regarding claims 10 and 22, Stone discloses the claimed invention except the presence of pesticides is not mentioned. It is well known that large crop farmers and even many gardeners regularly spray crops to prevent against bacteria, fungus, weed and pest damage, so it is considered obvious that a crop with or without ground cover placed over it would contain pesticides thereon, in order to achieve a successful yield. Further, Laverde discloses an agricultural film that also contains a fumigant therein, with a thickness of 4-10 mils, ready for placement upon a crop (Laverde, pg. 4, sect. 4.0). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide pesticide under the cover.

Regarding claims 17, 23 and 31, Stone discloses the present invention except he does not positively disclose the thickness of the sheets of ground cover. Laverde, as

stated above, disclose a cover film for various agricultural applications, one of which being ground cover (Laverde, figure on pg. 2). Laverde teaches the typical thickness of these films to be with in the range of 4-8 mils (Laverde, pg.2, sect. 1.1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Stone's ground cover at a thickness between 4-8 mils. in order to achieve weight specifications and transparency properties that are know to be favorable in the art.

Regarding claim 24, Stone discloses the claimed invention except the dimensions and area of removal is not stated. It is well known that ground cover is available is a numerous variety of sizes, as shown by Laverde, in order to meet the needs of a diverse market from small gardeners to large crop farmers. Furthermore, the Examiner takes Official Notice that the removal of ground cover from a field being harvested can be accomplished by using a wide range of increments that depend upon how much of the field is harvested per day and is not considered to hold patentable weight. It would have be been obvious to one having ordinary skill in the art at the time the invention was made to make Stone's ground cover sheet in larger dimensions and to remove it in twenty feet increments since the removal of the ground cover at harvest depends upon how much of the field is decided to be harvested each day.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan C. Alimenti whose telephone number is 703-306-0360. The examiner can normally be reached on Monday-Friday, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SCA

MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER